

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002927**Date Inspected:** 25-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 2130**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. Testino**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Tower and OBG Fabrication**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mr. Paul Dawson, arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China, for the purpose of monitoring welding and fabrication of the San Francisco / Oakland Bay Bridge (SFOBB) components. The QA Inspector observed the following:

Orthotropic Box Girder (OBG) Fabrication:

Production Monitoring Tests Macro Etches

The QA Inspector observed fifteen (15) each closed rib production monitoring tests (PMT) macroetch weld specimens representing deck plates DP-598-001 and DP-583-001 closed rib welds that were welded on May 24, 2008 (yesterday) are documented on a data sheet that is sitting in the QC office has been signed by ZPMC QC on May 24, 2008 and has not been signed by any ABF representatives. The QA Inspector telephoned ABF representative Mr. Warren Buehler and asked him if ABF has visually inspected these macroetch weld specimens. Mr. Buehler said no ABF personnel have visually inspected these macroetch weld specimens and that ABF will inform the QA Inspector when these macroetch specimens are ready for Caltrans personnel to perform visual inspections. At around 1530 hours ABF CWI Mr. Kevin Dye performed a visual inspection of these macroetch weld specimens and Mr. Dye said macroetch weld specimens 4-1 and 5-4 both have incomplete fusion and the remaining macroetch weld specimens are visually acceptable. The QA Inspector performed visual inspection of the macroetch specimens and determined macroetch weld specimens 4-1 and 5-4 appear to have incomplete fusion and the other thirteen macroetch weld specimens appear to comply with project specifications. All fifteen

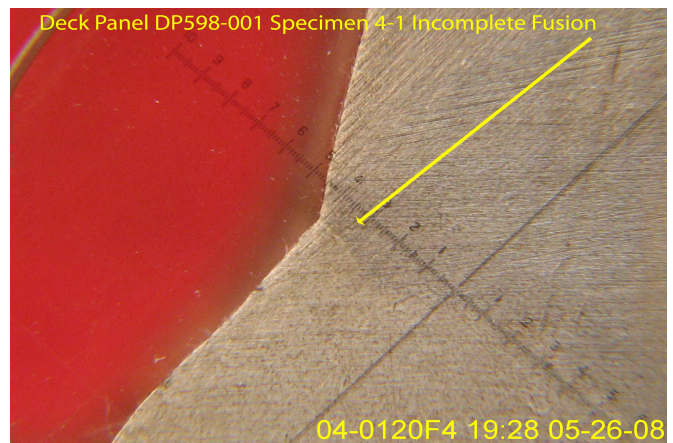
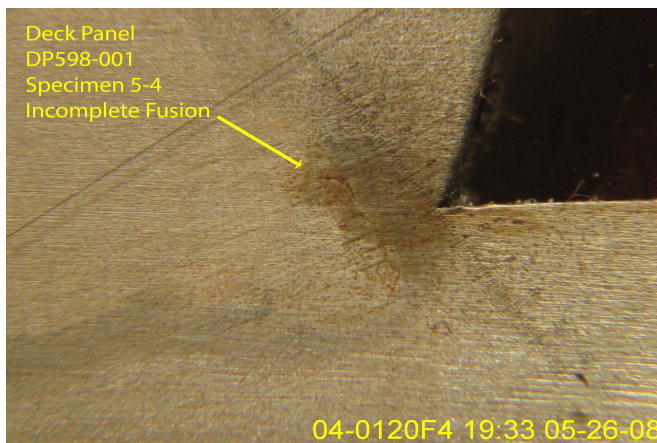
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macroetch weld specimens appear to contain 80 percent or greater weld penetration. The QA Inspector observed the "ZPMC PMT REPORT" document that has been signed by a ZPMC QC CWI and an American Bridge / Fluor CWI have deck plate DP-585 listed on the top of the document instead of DP-583 which was welded today and are stamped on the macroetch samples. The QA Inspector informed ZPMC Inspector Mr. Wang Lu Testino the data sheet lists a different macroetch specimen number from what is stamped on the macroetch plates. Mr. Testino said the data sheet is incorrect and he lined out DP-585 and wrote in DP-583 on the "ZPMC PMT REPORT". The results of these inspections are documented on an Excel spreadsheet titled "SAS OBG PMT Macroetch Log" and a copy of this file is posted on the Caltrans "Team China" internal sever computer system. On May 26, 2008 the QA Inspector made digital photographs of each of the macroetch specimens and copies of these photographs are posted on the Caltrans "Team China" common drive which is accessible to Quality Assurance Task Leaders and Structural Materials Representatives. Below are two digital photographs showing incomplete fusion indications in macroetch 604-001 sample specimens 4-1 and 5-4.



### Summary of Conversations:

See above.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowry (858) 344-2712, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Dawson,Paul	Quality Assurance Inspector
<b>Reviewed By:</b>	Carreon,Albert	QA Reviewer

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